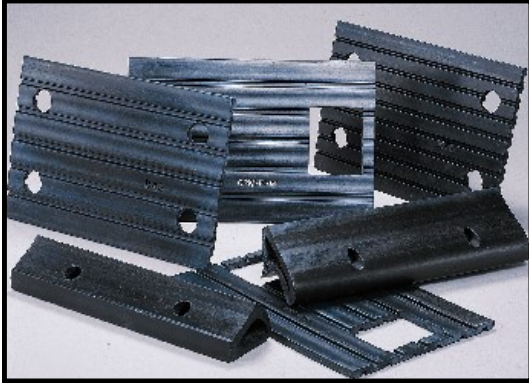


# Rail and Plate Pads



**Press-Seal Rail Products** is the largest supplier of custom-cut tie pads in North America. During more than 30 years of service, our tie pads have carried *billions* of gross tons of traffic in transit and heavy-haul freight applications.

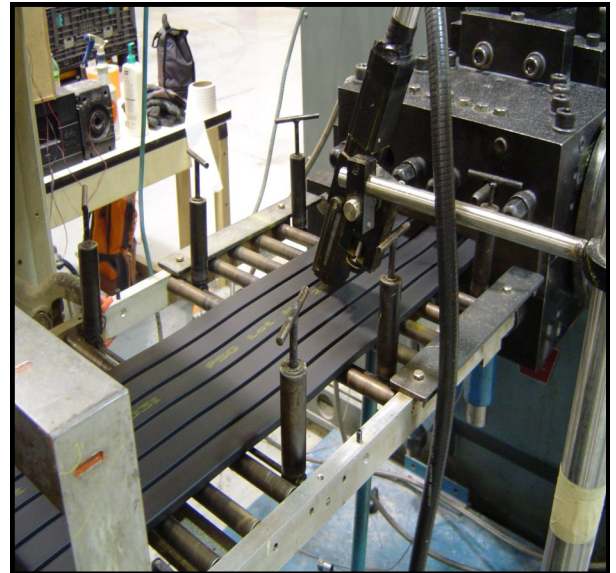
**Pads available:**      **Isoprene Rubber**  
                                 **Neoprene Rubber**  
                                 **HDPE**  
                                 **Masticated Rubber**

## **Standard Rubber Insulating Pad** **Material Properties include:**

- Excellent Chemical Resistance
- Excellent Electrical Resistivity
- Superior Weatherability
- Excellent Abrasion Resistance
- Excellent Compression Set

## **State-of-the-Art** **Manufacturing Processes**

- Solid-Modeling design software for rubber profiles and extrusion tooling
- Extrusion dies manufactured on 4-axis Fanuc CNC Wire EDMs
- Extrusion process continuously controlled by laser measuring equipment
- CNC Waterjet machine can process up to 2000 lbs. per day of rubber tie pads
- CNC controls allow easy customization of any tie pad configuration, including individual pad identification



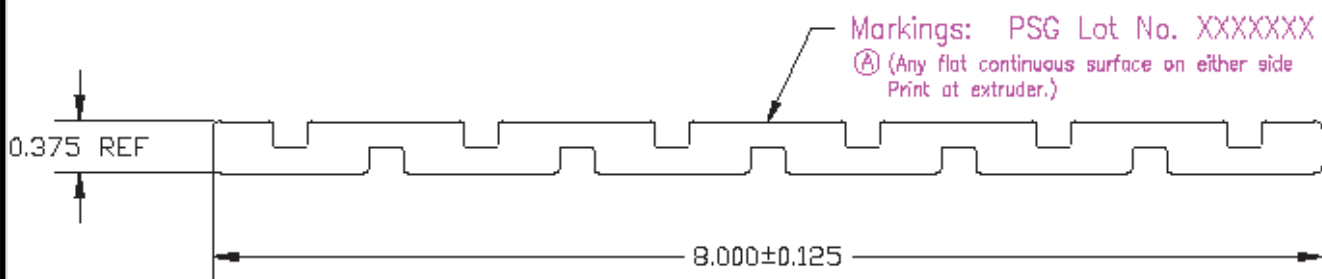
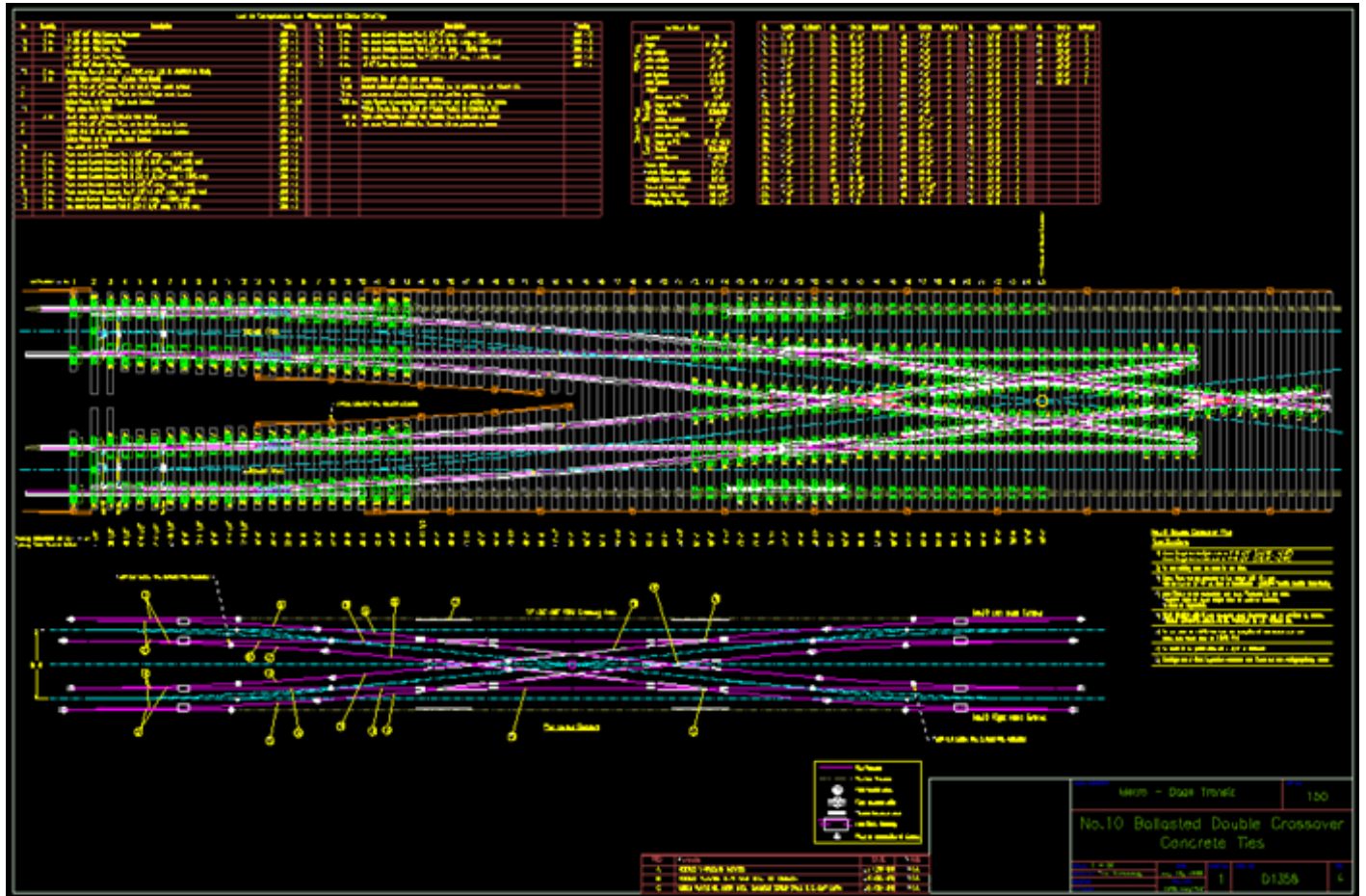
- ALL MAJOR TRANSIT SYSTEMS
- ALL CLASS I'S
- MAINTENANCE USE
- NEW CONSTRUCTION
- SHIMS
- PLATE PADS
- RAIL PADS
- NOISE AND VIBRATION MITIGATION USE
- CUT TO ANY RAIL OR PLATE SIZE



**Press-Seal**  
**RAIL PRODUCTS**

**Press-Seal Rail Products 2424 W. State Blvd. Fort Wayne, IN 46808 800-348-7325**

# RUBBER RAIL PADS FOR SPECIAL TRACKWORK



## 1/4" PAD

7-1/2"

8"

9"

10"

11"

12"

Width

## 3/8" PAD

MBTA 5-1/8"

MBTA 9-7/8"

8"

9"

9-1/2"

10"

Width



**Press-Seal**  
RAIL PRODUCTS

**Press-Seal Rail Products 2424 W. State Blvd. Fort Wayne, IN 46808 800-348-7325**

# STANDARD ISOPRENE RAIL PAD PHYSICAL PROPERTIES

Property	ASTM Method	PSG/F Rqrmnt	Notes	11711NC Performance (Average)	Status
Specific Gravity	D297	1.0 - 1.5 ± 5%		1.448	PASS
Hardness (Shore A)	D2240	70 ± 5		69	PASS
Tensile Strength (psi)	D-412	1400 min		1695	PASS
Elongation (min %)	D-412	350		475	PASS
Compression Set (% Max)	D395	20	22hr at 70C.	17	PASS
Cold Compression Set (%max) <sup>a</sup>	D1229	--	22hr at -18C, t30 reading.	30.2%	PASS
Resistivity (Ohm-cm Min) <sup>a</sup>	D257	3.0 x 10 <sup>12</sup>	1 minute @ 500 Vdc	1.04 x 10 <sup>14</sup>	PASS
Tear Resistance (lb./in min)	D624	200		221	PASS
Chemical Resistance (1N H2SO4) <sup>b</sup>	D471	no weight loss	168hrs. @ 23C.	0.5%	PASS
chemical Resistance (1N HCl) <sup>b</sup>	D471	no weight loss	168hrs. @ 23C.	0.4%	PASS
Ozone Resistance <sup>b</sup>	D1171	0		0	PASS
Water Absorption-volume(% max)	D471	10*	48hrs at 70C	2.7%	PASS
Water Absorption-weight (% max)	D471	10*	48hrs at 70C	2.0%	PASS
<b>Aged Values</b>		<b>7 days @ 70C</b>			
Specific Gravity	D297	1.0 ± 5%		1.444	PASS
Hardness (Shore A)	D2240	70 ± 5		72.4	PASS
Tensile Strength (psi)	D-412	1190		1587	PASS
Elongation (min %)	D-412	280		449	PASS
Compression Set (% Max)	D395	20		10.8	PASS
Resistivity (Ohm-cm Min) <sup>a</sup>	D257	3.0 x 10 <sup>11</sup>	168hrs. @70C. / 1 minute @ 500 Vdc	3.82 x 10 <sup>14</sup>	PASS
Tear Resistance (lb./in min)	D624	200		200	PASS



**Press-Seal**  
**RAIL PRODUCTS**

**Press-Seal Rail Products 2424 W. State Blvd. Fort Wayne, IN 46808 800-348-7325**

# NEOPRENE RAIL AND PLATE PADS

## TYPICAL PROPERTIES



### Press-Seal Corporation – Rail Products

2424 West State Blvd. • Fort Wayne, IN 46808 • Phone: (317) 434-2521 • Fax: (317) 434-1908 • [www.press-seal.com](http://www.press-seal.com)

**MATERIAL** M251-06 PLAIN NEOPRENE ELASTOMER BRIDGE BEARINGS

**STYLE** GRADE 2- 50, 60, 70 DURO

**FINISH** SMOOTH

**ASTM CALLOUT** SEE SPECIFICATION BELOW

#### PHYSICAL PROPERTIES

#### CONDITION

Hardness, Original	ASTM D2240	50 +/- 5	60 +/- 5	70 +/- 5
Tensile, Original	ASTM D412 Psi Min.	2250	2250	2250
Elongation, Original	ASTM D412 %	400	350	300

#### HEAT RESISTANCE, TEST METHOD D573 70 H @ 100 C

Hardness Change	Points	+ 15	+ 15	+15
Tensile Change	%	- 15	- 15	- 15
Elongation Change	%	- 40	- 40	- 40

#### COMPRESSION SET TEST METHOD B ASTM D395, 22 HOURS @ 100 C

Compression Set	%	35	35	35
-----------------	---	----	----	----

#### OZONE TEST METHOD D1149 100 PPHM, 20% STRAIN, 100 DEG F

No Cracks No Cracks No Cracks



**Press-Seal**  
RAIL PRODUCTS

**Press-Seal Rail Products 2424 W. State Blvd. Fort Wayne, IN 46808 800-348-7325**

# MASTICATED/CLOTH INSERTED RUBBER RAIL AND PLATE PADS

## MASTICATED RUBBER MEETS NYCT SPECIFICATION 18 TECHNICAL DATA Typical Test Results

- |     |   |   |
|-----|---|---|
| 1.  | Tensile Strength: 1000 Psi. min parallel to grain<br>400 Psi min perpendicular to grain       | Result: 1035<br>Result: 1201            |
| 2.  | Elongation 45% min perpendicular to grain   | Result: 59%                             |
| 3.  | Tear Strength 450 Psi min parallel to grain<br>200 Psi min perpendicular to grain             | Result: 465<br>Result: 338              |
| 4.  | Hardness 75-90 durometer  | Result: 80                              |
| 5.  | Heat Aging Tensile Change, 25% Max<br>Elongation Change, 25%, Max<br>Hardness Change, 10% Max | Result -1%<br>Result +10%<br>Result +5% |
| 6.  | Minimum Weight Spec.  | Result: 25.6 oz.                        |
| 7.  | Fiber Content 35 %  |   |
| 8.  | Extreme Temperature range -20 F to 120 F  | Result: No Change                       |
| 9.  | Specific Gravity 1.15   |   |
| 10. | Ozone Resistance Application Specific   |   |
| 11. | Flammability Test, FMVSS 302  | Result: Pass                            |





# HDPE RAIL AND PLATE PADS

## TYPICAL PROPERTIES

Property*	ASTM Test Method	Typical Values	
		English Units	Metric Units
Physical Properties			
Density	D1505	59.6 lbs/ft³	0.955 g/cc
Melt Index, Condition 190 °C / 2.16 kg	D1238	-	0.25 g/10 min
Polyethylene Classification	D4976	Group 2, Class 3, Grade 5	Group 2, Class 3, Grade 5
Mechanical Properties			
Tensile Strength @ Yield	D638	4000 psi	27.6 MPa
Ultimate Elongation	D638	> 600%	> 600%
Tensile IMPact Strength	D1822	70 ft-lbf/in²	147 KJ/m²
Notched Izod IMPact Strength	D256	2.99 ft-lbf/in	159 J/m
Compressive Stress @Yield	D695	1,500 psi	10.3 MPa
ESCR, Condition A (10% Igepal), F <sub>50</sub>	D1693	45 hours	45 hours
ESCR, Condition B (100% Igepal), F <sub>50</sub>	D1693	35 hours	35 hours
Durometer Hardness	D2240	64 Shore D	64 Shore D
Flexural Modulus	D790	200,000 psi	1379 MPa
Coefficient of Friction, Static	D1894	0.31	0.31
Coefficient of Friction, Kinetic	D1894	0.22	0.22
Thermal Properties			
Coefficient of Linear Thermal Expansion	E831	7 X 10 <sup>-5</sup> in/in/°F	1.26 X 10 <sup>-4</sup> cm/cm/°C
Decomposition Temperature	Union Carbide	~ 650 °F	~ 345 °C
Vicat Softening Temperature	D1525	257 °F	125 °C
Heat Deflection Temperature @66 psi	D648	171 °F	77 °C
Brittleness Temperature	D746	< -120 °F	< -84 °C
Glass Transition Temperature	Union Carbide	-193 °F	-125 °C
Continuous Use Temperature	---	-100 °F to 180 °F	-73 °C to 82 °C
Thermal Conductivity	Private Test	2.5 Btu-in/h-ft²-°F	.35 W/m-°K
Burn Rate	D635	1 in/min	25.4 mm/min
Ignition Temperature, Flash Conditions	D1929	645 °F	341 °C
Ignition Temperature, Self Ignition Conditions	D1929	660 °F	349 °C
Flame Spread	E84 Tunnel Test	98	98
Smoke Developed	E84 Tunnel Test	350	350
Fire Rating	Underwriters Labs	UL94HB	UL94HB
Electrical Properties			
Dielectric Strength	D149	510 V/mil	20.1 KV/mm
Dielectric Constant	D150	2.35	2.35
Volume Resistivity	D257	> 2.3 X 10 <sup>15</sup> ohm-in	> 6 X 10 <sup>15</sup> ohm-cm



**Press-Seal**  
**RAIL PRODUCTS**

**Press-Seal Rail Products 2424 W. State Blvd. Fort Wayne, IN 46808 800-348-7325**